REMARKS

This response is intended as a full and complete response to the non-final Office Action mailed August 10, 2005. In the Office Action, the Examiner notes that claims 1-21 are pending and rejected. By this response, claims 3, 4, 6, and 7 are amended to correct minor informalities and objections raised by the Examiner. No new matter has been entered.

In view of both the amendments presented above and the following discussion, Applicants submit that none of the claims now pending in the application are indefinite or obvious under the respective provisions of 35 U.S.C. §112 and §103. Thus, Applicants believe that all of these claims are now in allowable form.

It is to be understood that Applicants, by amending the claims, do not acquiesce to the Examiner's characterizations of the art of record or to Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the prior art of record to the pending claims by filing the instant responsive amendments.

OBJECTIONS

IN THE SPECIFICATION:

The Examiner has objected to the specification because of an informality at page 13, line 21. Applicants have amended the specification as suggested by the Examiner. Therefore, Applicants respectfully request that the Examiner's objection be withdrawn.

IN THE DRAWINGS:

The Examiner has objected to the drawings because because "In Figure 3, descriptive text labels are required for elements 302_1-302_4, 304, 310, 312, 314, 316, 318, 320, 322, 330 and 332" and "In Figure 4, the descriptive text labels are unclear." In response, Applicants have added the descriptive text labels for elements 302_1-302_4, 304, 310, 312, 314, 316, 318, 320, 322, 330 and 332 of FIG. 3 and have clarified the descriptive text labels of FIG. 4.

In view of the above, Applicants respectfully request that the Examiner's objection be withdrawn.

ATTACHMENT: Replacement Drawing Sheets (in compliance with 37 CFR 1.121(d)) including Figures 1 - 4 are attached.

IN THE CLAIMS

The Examiner has objected to claims 3, 4, and 7 for various informalities. Applicants have amended the claims as suggested by the Examiner. Therefore, Applicants respectfully request that the Examiner's objection be withdrawn.

REJECTIONS

35 U.S.C. §112

The Examiner has rejected claims 6 and 7 under 35 U.S.C. §112, ¶2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse the rejection.

With respect to claim 6, Applicants have herein amended claim 6 to change "wherein said plurality of frequencies for a write enable signal for a memory that stores stream identifiers" to "wherein said plurality of frequencies form a write enable signal for a memory that stores stream identifiers."

With respect to claim 7, Applicants have herein amended claim 7 to change "plurality of identifiers" to "plurality of stream identifiers."

As such, Applicants submit that claims 6 and 7 are definite and fully satisfy the requirements of 35 U.S.C. §112, ¶2, and are patentable thereunder. Therefore, Applicants respectfully request that the Examiner's rejections be withdrawn.

35 U.S.C. §103

Claims 1-5

The Examiner has rejected claims 1-5 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,710,593 to Reynolds (hereinafter "Reynolds"). Applicants respectfully traverse the rejection.

In the Office Action, the Examiner states that "Reynolds does not specifically disclose that the adder operates said oscillator as a plurality of oscillators." (Office Action, Pg. 5). The Examiner further states that Reynolds discloses a digital video test signal generator and that, by including more than one oscillator within the test signal generator, more test signals can be produced. As such, the Examiner concludes that it would have been obvious to one skilled in art to include that the adder operates the oscillator as a plurality of oscillators. Applicants respectfully disagree.

Applicants' independent claim 1 recites:

> "1. A rate generator for generating a plurality of frequencies comprising:
> an oscillator comprising:
> a phase accumulator for storing an accumulated phase value;
> a phase increment register for storing a phase increment value; and
> an adder, coupled to said phase accumulator and said phase increment register, for summing said phase increment value and the accumulated phase value to provide a sum to said phase accumulator, said adder for generating a pulse at a frequency each time the sum reaches a pre-determined value; and
> a controller, coupled to said oscillator, for time sharing said phase accumulator, phase increment register and said adder to operate said oscillator as a plurality of oscillators to produce a plurality of frequencies."
> (Emphasis added.)

As such, Applicants' invention of at least claim 1 teaches an oscillator including a phase accumulator, a phase increment register, and an adder. The phase accumulator stores an accumulated phase value. The phase increment register stores a phase increment value. The adder sums the phase increment value and the accumulated phase value to provide a sum to the phase accumulator, and generates a pulse at a frequency each time the sum reaches a pre-determined value. A controller coupled to the oscillator time shares the phase accumulator, phase increment register, and adder of the oscillator in order to operate the oscillator as a plurality of virtual oscillators for producing a plurality of frequencies. In other words, the Applicants' invention is directed towards a rate generator adapted for generating a plurality of frequencies using a single

physical oscillator circuit. The controller operates the physical oscillator operates as a plurality of virtual oscillators (by time sharing the phase accumulator, phase increment register, and adder of each oscillator).

First, Applicants submit that the Examiner's assertion that it would have been obvious to one skilled in art to include that the adder operates the oscillator as a plurality of oscillators, even if true (which the Applicants maintain it is not true), would still fails to teach or suggest Applicants' invention of at least claim 1. As taught in Applicants' invention, the controller operates the oscillator as a plurality of oscillators by time sharing the phase accumulator, phase increment register, and adder of the oscillator. As such, even if the Examiner's assertion regarding the adder was in fact correct (which Applicants maintain it is not), the teachings of Reynolds as adapted according to the Examiner's assertion would still fail to teach or suggest Applicants' invention of at least claim 1 as a whole.

Furthermore, in the Office Action, the Examiner asserts that "[b]y including more than one oscillator within the test signal generator, more test signals can be produced." (Office Action, Pg. 5). The Applicants respectfully submit, however, that including more than one oscillator in the test signal generator of Reynolds actually defeats the purpose of Applicants' invention of at least claim 1. Specifically, the addition of physical oscillator circuits to the test signal generator, as suggested by the Examiner, increases the number of physical components required to produce more clock signals. By contrast, Applicants' arrangement, in which the controller operates the physical oscillator as a plurality of virtual oscillators, actually decreases the number of physical components required to produce additional frequencies.

Moreover, even if the inclusion of additional physical oscillators did not defeat the purpose of Applicants' invention of at least claim 1 (which Applicants maintain that it does), Reynolds is completely devoid of any motivation to include additional oscillators (physical or virtual) within the test signal generator taught in Reynolds. Rather, Reynolds teaches a digital video test signal generator for varying desired sub-carrier-to-horizontal phase offset, thereby enabling adjustment of the subcarrier-to-horizontal phase of a video test signal. (Reynolds, Col. 1, Lines 65-67). Reynolds merely teaches that a composite video test signal is generated by combining color difference components with

luminance data, where the color difference components are modulated using sine and cosine subcarrier signals. Reynolds is completely devoid of any teaching, suggestion, or motivation for including additional physical oscillators within the test signal generator taught in Reynolds. As such, Reynolds, alone or in combination with the Examiner's assertions, fails to teach or suggest Applicants' invention, as a whole.

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather, the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 USPQ 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added). The Reynolds reference fails to teach or suggest Applicants' invention as a whole.

As such, Applicants submit that independent claim 1 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, claims 2-5 depend directly or indirectly from independent claim 1 and recite additional limitations therefor. As such, and for at least the same reasons as discussed above, Applicants submit that dependent claims 2-5 are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, Applicants respectfully request that the rejection be withdrawn.

ALLOWABLE SUBJECT MATTER

The Examiner has objected to claims 8 and 9 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants thank the Examiner for indicating the allowable subject matter with respect to these claims. However, in view of the amendments correcting informalities, as well as the arguments set forth, herein, Applicants believe that base claim 7 (and all intervening claims) are in allowable form and, as such, the dependent claims 8 and 9,

as they stand, are therefore in allowable condition. Therefore, the applicants respectfully request that the foregoing objections to claims 8 and 9 be withdrawn.

SECONDARY REFERENCES

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

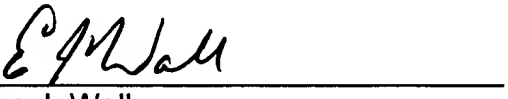
CONCLUSION

Thus, Applicants submit that none of the claims, presently in the application, are obvious under the provisions of 35 U.S.C. §103. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Michael Bentley at (732) 383-1434 or Mr. Eamon J. Wall, Esq at (732) 383-1438 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Dated: 11/9/05



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IN THE DRAWINGS:

Please replace originally filed drawings (Figures 1 – 4) with replacement drawings (Figures 1 – 4). Replacement drawing sheets are attached.